Serial No. 09/660,025 Page 2 of 12

## IN THE CLAIMS:

Please amend the claims as follows:

 (Currently Amended) A method of regulating traffic in a communications network comprising the steps of:

aggregating one or more component traffic flows into a component traffic stream:

aggregating ene or more a <u>plurality of</u> component traffic streams into an aggregate stream, <u>wherein the plurality of component traffic streams comprises a</u> Guaranteed Bandwidth Traffic <u>Stream</u> and a <u>Best Effort Traffic Stream</u>;

carrying the aggregate stream in a single, FIFO queue; and generating selective backpressure on selected ones of the component traffic streams such that selected ones of the component streams are desirably regulated, wherein said generating selective backpressure comprises;

asserting a first backpressure signal towards the Guaranteed

Bandwidth Traffic Stream and the Best Effort Traffic Stream; and

asserting a second backpressure signal towards the Best Effort

Traffic Stream:

said selective backpressure being generated in response to respective credit counters associated with said selected ones of the component traffic streams reaching a threshold level.

- (Previously presented) The method according to claim 1, wherein said aggregation of the one or more traffic flows is performed according to a destination of the traffic flows and the similarity of Quality of Service requirements of the traffic flows.
- (Previously presented) The method according to claim 1, wherein said aggregation of the one or more component traffic streams into said aggregate stream is performed according to a destination of the component traffic stream.

380853-1

Serial No. 09/660,025 Page 3 of 12

- (Previously presented) The method according to claim 3, wherein said aggregation is performed according to an absence of delay guarantees.
- 5. (Cancelled)
- 6. (Cancelled)
- (Previously presented) The method according to claim 1 further comprising the steps of:

maintaining an aggregate queue occupancy counter; initializing the credit counter to a maximum value;

decrementing the credit counter when an item of specific type arrives in the aggregate queue;

incrementing the credit counter when the queue is given service granted to the specific type of traffic stream without regard to the type of data item which departs the single FIFO queue;

truncating the credit counter at a specific maximum level; and resetting the credit counter to a maximum value when the aggregate queue occupancy counter falls to zero.

- (Previously presented) The method according to claim 6, wherein said backpressure generating step is performed when the credit counter reaches a value of zero.
- (Currently Amended) The method according to claim 1, wherein two of eaid component traffic streams are a Guaranteed Bandwidth Traffic Stream and a Best Effort Traffic Stream, and wherein each data item arrival and departure event can be associated with either guaranteed or excess bandwidth service provided by a corresponding scheduler.
- 10. (Currently Amended) The method according to claim 9, wherein the

380653-1

Serial No. 09/660,025 Page 4 of 12

generating selective backpressure step further comprises the steps of:
maintaining an aggregate queue occupancy counter; and
maintaining a Best Effort credit counter;
asserting a first backpressure eignal; and
asserting a second backpressure eignal.

## 11. (Cancelled)

 (Previously presented) The method according to claim 10, wherein said step of maintaining said Best Effort credit counter further comprises the steps of: initializing the Best Effort credit counter to a maximum value;

incrementing the Best Effort credit counter when an excess bandwidth service is provided to said aggregate queue;

decrementing the Best Effort credit counter when a data item arrival is associated with excess bandwidth service; and

resetting the Best Effort credit counter to its maximum value each time said aggregate queue occupancy counter reaches a value of zero.

- (Previously presented) The method according to claim 12 wherein said incrementing step is not performed if the first backpressure signal is asserted.
- 14. (Original) The method according to claim 12, wherein said decrementing step is not performed if the arriving data item belongs to the Guaranteed Bandwidth Traffic Stream.
- 15. (Previously presented) The method according to claim 10, wherein said step of asserting a first backpressure signal occurs whenever the aggregate queue occupancy counter exceeds a predefined threshold.

Serial No. 09/660,025 Page 5 of 12

- 16. (Previously presented) The method according to claim 10, wherein said step of asserting a second backpressure signal occurs whenever the Best Effort credit counter reaches a value of zero.
- 17. (Currently Amended) An apparatus for regulating traffic in a communications network comprising:

means for aggregating one or more component traffic flows into a component traffic stream;

means for aggregating one or mere a plurality of component traffic streams into an aggregate stream, wherein the plurality of component traffic streams comprises a Guaranteed Bandwidth Traffic Stream and a Best Effort Traffic Stream;

means for carrying the aggregate stream in a single, FIFO queue; and means for generating selective backpressure on selected ones of the component traffic streams such that selected ones of the component streams are desirably regulated, wherein said means for generating selective backpressure comprises;

means for asserting a first backpressure signal towards the Guaranteed Bandwidth Traffic Stream and the Best Effort Traffic Stream; and

means for asserting a second backpressure signal towards the Best Effort Traffic Stream:

means for said means for generating selective backpressure being generated <u>adapted for generating selective backpressure</u> in response to respective credit counters associated with said selected ones of the component traffic streams reaching a threshold level.